ABSTRACT

A system and method is provided for minimizing read-only data retrieval time and/or area through the use of combinatorial logic. In one embodiment of the present invention, two address bits are provided to a binary logic function device. The binary logic function device uses the two address bits and predetermined logic functions (i.e., functions that represent a plurality of read-only data values) to produce a binary value – which is the requested read-only data. In another embodiment, the binary values produced by the binary logic function device are provided to at least one multiplexer. The at least one multiplexer uses at least a portion of the remaining bits (i.e., the address bits not being provided to the binary logic function device) to select (or narrow down) which binary values may be the read-only data requested. If the output of the at least one multiplexer contains more than one binary value, then those values are provided to at least one other multiplexer. The at least one other multiplexer uses the remainder of the remaining bits to select which binary value is the read-only data requested.